

Privacy & Security Standards Workgroup

Draft Transcript

April 29, 2011

Presentation

Judy Sparrow – Office of the National Coordinator – Executive Director

Good afternoon, everybody, and welcome to the Privacy and Security Standards Workgroup hearing meeting. This is a Federal Advisory Committee, so there will be opportunity at the end of the call for the public to make comment. Just a reminder to workgroup members to please identify yourselves when speaking.

Let me do a quick roll call: Dixie Baker?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

I'm here.

Judy Sparrow – Office of the National Coordinator – Executive Director

Walter Suarez?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

I'm here.

Judy Sparrow – Office of the National Coordinator – Executive Director

Steve Findlay? Anne Castro? I don't think she could make it today. David McCallie? Wes Rishel? Sharon Terry? She was on. Jeff Jonas?

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

I'm here.

Judy Sparrow – Office of the National Coordinator – Executive Director

Chris Viene? Lisa Gallagher? Vern Rinker?

Vern Rinker

Here.

Judy Sparrow – Office of the National Coordinator – Executive Director

Doug Fridsma?

Doug Fridsma – ONC – Acting Director, Office of Standards & Interoperability

Here.

Judy Sparrow – Office of the National Coordinator – Executive Director

Mike Davis? John Moehrke?

John Moehrke – Interoperability & Security, GE – Principal Engineer

I am here.

Judy Sparrow – Office of the National Coordinator – Executive Director

Ed Larsen? Kevin Stein? John Blair?

John Blair – Tacanic IPA – President & CEO

Here.

Judy Sparrow – Office of the National Coordinator – Executive Director

Did I leave anyone off?

David McCallie – Cerner Corporation – Vice President of Medical Informatics

David McCallie just joined.

Judy Sparrow – Office of the National Coordinator – Executive Director

Oh, good. Thank you, David. Now I'll turn it over to Dixie and Walter.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Thank you, all, for dialing in today. I wanted to start by introducing to everyone a new member of our workgroup. Jeff Jonas has joined us. Jeff is from IBM. And, Jeff, would you just kind of say a few words about your interests and what you bring to this workgroup?

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

Sure. I used to have a software company called SRD and spent my life designing, deploying and delivering all kinds of software technology. I've built about 100 systems, plus or minus and over the years I have become more and more interested in how we can build higher quality prediction systems and at the same time, take greater care around privacy and civil liberties. I am on the advisory board of Epic and I'm on the advisory board for Privacy International and I'm very interested in this space and here to help.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Thank you. We're really pleased that you agreed to join us, Jeff. I'm absolutely sure you'll bring huge value to us.

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

Let's hope so.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Okay. The topic for discussion today is, this is the, I believe, third of a series of meetings we've had around the topic of provider directories. To refresh people's minds, the HIT Policy Committee asked the Standards Committee to develop standards around enterprise-level provider directories (ELPDs) and the Policy Committee and its workgroup are still working on individual-level provider directories.

We started, this workgroup started working on looking at standards for enterprise-level provider directories and soon discovered that it was really difficult to completely separate our discussion between a directory that contains only the identities and information about enterprises versus one – especially in the healthcare domain, versus one that includes individual level identity and other information. So we asked the Standards Committee to give us the go-ahead to address both, ELPDs and individual-level provider directories (ILPDs) at the same time. So we've held a series of testimonies around provider directories and at least to date, all of our speakers have chosen to address both, enterprise level and individual level as one type of directory.

So, today we have speakers from HL-7 to talk about the HL-7 work around provider directories and we have speakers from Massachusetts Health Information Exchange. Ken Rubin is here to talk about the HL-7 work and, Ken, we really appreciate your agreeing to meet with us today. And from Massachusetts we have Greg DeBor and Dan Kearney.

With that, let me turn it over to—well, let me ask Walter if he wants to add anything at this point.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

No, Dixie. I think you've done a great job. I think we are, as you pointed out, gathering really information from different organizations, standards organizations, HIEs and vendors to understand their perspectives and approaches on provider directories and the standards side of it. So this is, as you point out, the third round of these gatherings.

I do want to say, with respect to the recommendations on individual-level provider directories, which I will cover later in the call, we at the Policy Committee Information Exchange Workgroup are going to be presenting this to the Policy Committee on May 11th. So please do consider this at this point still a draft and I will re-emphasize that point when we talk about the recommendations, but I just wanted to mention it at the beginning of the call here.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Yes. I thought about that as soon as I turned it over to you, Walter. I should point out, for those of you who are just joining us in this conversation, Walter Suarez—we're very lucky that my Co-Chair on this workgroup also chairs the Provider Directory Task Force of the Information Exchange of the Policy Committee. So Walter is at the forefront of what's happening on the Policy Committee and it really provides us an opportunity to consider what's likely to come from the Policy Committee downstream in our deliberations.

With that I'll turn it over to Ken.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Well, first of all, I'd like to thank all of you for the opportunity and extend my apologies that I wasn't able to join at the previous calls, which I'd been invited. There was a disconnect in terms of availability. I was actually off the grid, so please accept my apologies for that.

I understand I have about 20 minutes. Is that correct?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Yes. That's fine.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Okay. Then what I'd like to do is I took a review of the questions that had been provided in advance. I would like to spend maybe five minutes and discuss kind of an overview of how we've gone about developing these particular standards so you can put into context the two pieces of work that I want to bring before you. Spend five minutes on the healthcare and community services provider directory standards work that is part adopted and part under way and then spend the remainder of the time kind of walking through the questions as interactively as you all would care to be if that sounds reasonable.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

That sounds fine. Thank you.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Okay. First, just in terms of kind of self-identification, my name is Ken Rubin. I'm with HP. I wear a couple of different hats, but relevant to this particular activity, I am one of the Co-Chairs of the HL-7 Service Oriented Architecture Workgroup and I'm also one of the Chairs of the OMG's Healthcare Domain Task Force. The reason I bring up the two different standards bodies is the particular standard that we're discussing today is actually a product of this collaboration between those two standards groups. I presume you're all familiar with HL-7. Let me spend just two seconds on the OMG.

The OMG is a standards group that has been around for about 20 years, primarily technology side, but they have workgroups that are in multiple verticals, including health. The focus of that community tends to be on distributed systems and architecture and service oriented architecture is a piece of that, which is why they're involved in this collaboration. So in a nutshell, the way this process works, we use the HL-7 community as the basis for establishing what the needs are for these service oriented architecture

standards. So the idea, and many of you will be familiar with Web services – in a nutshell, the problem we’re trying to solve is so that there is consistency across Web service implementations in multiple different organizations and countries. Web services themselves allow a certain portion of interoperability, but through your organizations, can implement something all in Web services and still not have those things interoperate. So at its very basic level what we are doing is trying to come up with health industry standards around service oriented architecture or common services providing a standardized way of interacting with, in effect, business capabilities.

The way the process works, HL-7 is identifying functionally the scope of what types of standards we take on, so it was HL-7 that identified that a services directory to be able to discover providers and provider organizations would be something of need within the industry. Then that organization will ultimately or actually ultimately does functionally specify what are the behaviors, what are the capabilities that would fall into such a directory and that goes out to ballot as an HL-7 standard. Upon completion of that activity usually we go through as a draft standard and then follow up with a normative standard.

What the OMG does is take that specification, which defines what needs to be done, but not how and the OMG then binds that into the technology component and the architecture to say this is how that set of needs would be realized in Web services protocols, so things like SOAP and WSDL, HTTP, etc. So that’s, in effect, how the process works.

Shifting just a moment into the healthcare and community services provider directory or HCSPD, which isn’t the best acronym, this is a specification that is through the HL-7 side of the process and presently under consideration in the OMG process. What does the healthcare and community services provider directory do? In a nutshell, it is a yellow pages capability. So, for instance, let’s suppose that I’m looking for; the term services here is ... when I’m using services now I’m talking about the delivery of help or people types of services; so I need a radiologist that can read film with a certain set of capabilities that has standing office hours between midnight and 6:00 a.m. and provides tele-radiology support. The human services directory would allow me to discover organizations or individuals that provide that type of a capability so that, you know, I might use a referral or do an e-consult, that type of a thing. So that is what the HCSPDIR specification, the problem it is trying to solve.

Let me pause there for a second. Are there any questions? I know I’m moving fairly quickly.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Just a quick question, this function is, generally speaking, as a white pages—I don’t want to go back to those terms white pages and yellow pages, but is this pointing to individuals primarily or to organizations as well or to both?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

The short answer is both. The information content—and this is one of the issues I wanted to get into a little bit as I went through the questions that you posed in advance. Our particular specification deals less directly with the information content as it does the behavior. How do I look something up? How do I ask for something to be looked up? What comes back after I do the lookup? You know, do I get back a single name? Do I get back a list of names and how do I manage those things? So the function of our standard is really around how does the directory work—not how does it do its job, but how do I interact with that capability. So that is what we are focused on standardizing. The information content, what we are looking up or about whom are we looking this up—is it an individual or is it an organization—is out of the scope of the specification directly, so it can be used in either situation. That’s a function of the people that are consuming this back.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Okay.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

So the HL-7 standard, where it leaves off, it identifies a set of interfaces at a high level. It’s what we call a functional standard, so for those that are familiar with the HL-7 electronic health record service or

functional model, the EHR functional model, this is along the same lines, but around a service specification, so it will define at a high level in business terms what are the core functions that a services directory should perform. How do we interact with that? What are the high-level interfaces? What are the inputs from a business point of view? What are the outputs from a business point of view? It doesn't get into matching logic or any of that type of stuff. That would be up to the implementations. So that's what the functional specification does.

The technical specification, which is the OMG work that is paired with the HL-7 work, that will then specify moving from business terms into technology platforms. How do we realize this capability in a Web services platform or how do we realize this in some other type of platform, SOAP or REST or pick your particular platforms?

In terms of the current state of these standards, the HL-7 standard is valid and adopted as normative specifications, so that is presently available as a normative standard. The OMG work is done in effectively three stages. The first stage is the OMG will issue an RFP or a request for proposed standard, to industry and then people that are interested will come back with proposed specifications meeting the criteria of the RFP, so much the same as you might find in a government solicitation. An RFP goes out and then answers come back. The RFP contains a set of requirements and then the responses, if they're responsive, meet those requirements.

The current state of this particular specification, the RFP has just been issued to industry. That's been out for less than two months. The response window for that is about a year from now, so at present we presume that various parts of industry are looking at that and deciding whether or not they would like to bring forward candidate work, which is the realization, the technical realization of this business specification in a technology. So that is the current state of the HCSPDIR specification and what it does.

If that provides a sufficient overview, then I'm happy to jump into some of the questions that have been posed for us to think about.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

You may have said this and I just missed it, because I've only been able to pay partial attention unfortunately. Is the model assuming a distributed set of directory services or does it assume a centralized service or is it a don't care?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

It's more of a don't care. One of the kind of core principles around all of our specification work is we use the words shall not preclude a lot, so we don't want to predetermine an implementation realization of these specifications. We don't want the interface to mandate a centralized deployment or a distributed deployment. We need to be capable of supporting both. So I would assert that the interfaces included will allow for a distributed, peer-to-peer type realization of the spec, but it could also be used centralized.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Okay. Well, I have a bunch of questions about that, but I'll let you get further along, because you're probably going to answer them anyway.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

I have a question, Ken. Well, first of all, it's kind of difficult to figure out how you do—the interfaces must be at a very behavioral level, specified behaviorally so they don't even assume whether it's a SOAP kind of interface or REST or anything, right?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Well, the short answer is that's why we do this in two stages. So the reason we have these two specifications; one of them, in pure business terms, is absolutely agnostic. It can be SOAP. It can be REST. It could also be paper. It's specifying in business terms how do I interact with this type of a business capability of identifying, you know, candidate providers and coming back with a list of potential candidates based upon a set of selection criteria. So that is absolutely technology independent.

Now, the OMG portion of this, very specifically, will get into and there will be exactly one realization per technology stack, so when we issued the RFP. This now I'm talking about the actual RFP, we are mandating that the submitters, the responders to that RFP, include a binding to SOAP and we are leaving open the possibility to a RESTful implementation of this as well. So we're not mandating REST, but we are encouraging REST as well.

John Moehrke – Interoperability & Security, GE – Principal Engineer

Ken, the spec that is normative from HL-7 is this behavioral spec, right?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

It's the functional spec. Correct.

John Moehrke – Interoperability & Security, GE – Principal Engineer

Okay. Does that include a schema—?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Yes.

John Moehrke – Interoperability & Security, GE – Principal Engineer

—or just the interfacing requirement?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

It does not include a schema. The specific intent is that the schema would be done in the OMG.

John Moehrke – Interoperability & Security, GE – Principal Engineer

Okay. So there is no definition of what a provider entry looks like or what are queryable parameters?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

There are informative references. Actually, if it's okay, could I defer that question just a little bit? Because I think I do touch that a little bit more effectively in the prepared responses to your questions.

John Moehrke – Interoperability & Security, GE – Principal Engineer

Sure. Then the other half of that is, of course, if you have a schema and you have entries, how have you dealt with securing those to protect the privacy of the individual they describe. So I'll let you carry on then.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Well, the latter half of that I don't think has been addressed as of yet, because the technical specification doesn't yet exist. So that could very well be something certainly we'll need to think about—

John Moehrke – Interoperability & Security, GE – Principal Engineer

But that's not part of the behavioral criteria?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

I don't believe so. I think the expectation, we have other services—and I know, John, from our personal histories that you're aware of some of those other capabilities. There are other SOA services that have been specified around access control and audit and so on. The expectation in a distributed architecture is that we would rely upon those types of services and there would be inter-service dependencies to allow for that type of disclosure to be managed, because again, we're specifying a specific service interface, not the entire architecture. So we would presume that within an implementation there would be cross dependencies on security infrastructure.

I realize time is going quickly, so let me at least try to touch on the, I believe it was seven, questions that have been posed for us to try to have an initial point of view. The first question was what capabilities and standards does your system use or enable the EHR to query a provider directory?

I think we've probably covered that one off. One piece that hasn't specifically been mentioned I think is part of the answer to John's question. There is some complementary work currently under way that Galen Mulrooney has been participating in; I thought he was scheduled to speak; I may be incorrect on that; called the interdependent registries works. This is being hosted by the Patient Administration Committee in HL-7. They are looking at information content and commonalities across directories. Our expectation is that products of that work would inform the technical work that is presently under way on the OMG and we actually have specific call outs in the RFP creating dependencies on that work if and when that becomes available. So while we within the healthcare and community services provider directory don't have any formal binding around the information content for the directory, we do have expectations that a work is coming and would be very relevant and pertinent to implementations of such a directory. We have the hooks there to take advantage of that content if and when that is available. So we hopefully will play well in the sandbox with these other specifications as they come to fruition.

Galen Mulrooney – U.S. Department of Veteran's Affairs

Ken, I just wanted to let you know I am on the line and deferred to speak, because I figured you were going to be covering most of this anyways, but I can elaborate on any other questions at the end.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Okay. Thank you, Galen. Great. Glad to hear you're on.

The second question: I'll just press on if that's okay since I know we're running short on time. What information do electronic health records need to retrieve from provider directories in order to enable the provider organization to exchange health information with other provider entities? We have called out some examples and the original use case; and there are use cases in the functional specification; were things like skill set, geographic location, privileging and so on. Again, the focus of our particular standard is less around those identifying traits and more around the behavior that would be associated, so look up by trait or type of trait. And we want to be as open to multiple trait sets as possible, because these things may change over time and also across geographies. So while I know on this call we're focused on the U.S., one of the HL-7 challenges is it is an international standard, so we need it to accommodate needs beyond the U.S. borders.

The third question: What technical standards, message content, etc. would I recommend for enabling an EHR to query a provider directory and what gaps exist today in the standards for such exchanges? I don't know that I'm the best person to answer that specific question. We have or did do somewhat of a canvassing of this when we were preparing the community services or the—yes, the community services directory work. We didn't find an existing at least messaging stack that we felt addressed the whole of the needs for our specification. In the RFP we've actually asked the submitters if they're aware of relevant work to identify what work is relevant and how it would fit into a candidate, but I don't have a specific recommendation at the moment on that particular part of the activity.

What certification criteria would I suggest for the EHR query of a provider directory? One comment I would like to make here—and this will actually come back up again in point seven of other areas to be considered. As you consider recommendations and maybe in the interest of time I'll have to leave it with this one thought; as you consider standards for this space I would urge the committee to recognize that the behavior is separate and distinct from the information assets that are needed within the directory. So we need to consider both, how do we interact with the directory and then what is the data that's contained within the directory that is also the result of that interaction.

I would express concern if those are considered as one conversation and not two conversations that you may end up forcing a particular implementation technology that closes a number of potential creative doors and what could be good and innovative ways to solve this problem. So I would urge the committee to consider how do we interact with the capability and what are the functions of a directory and then

separately, what are the information components, the trait sets, the fields that are contained within the directory as two separate conversations.

With that I realize I'm very short on time and I'd like to leave a minute for Q&A. Are there any comments or questions?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

I agree with that. I think David's comment of whether it assumes a centralized or federated model, it makes it hard to understand how a functional spec could just allow for either one and yet be useful. Maybe I should have reviewed this functional spec beforehand, but it's hard to understand exactly how you do a function specification without assuming some level of high-level architecture.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Well, in a nutshell, and I know I can't do that topic justice in just a few seconds and I'm happy to take it up off-line if that's of interest, but in a nutshell, the service architecture leaves the burden of coordination across service instances as an implementation issue within the service. So the external facing interface, you interact with one instance of the service and then that instance of the service is responsible for giving an answer. Whether that instance can do it itself or requires coordination across 1 or 10 or 1,000 other instances is a service implementation problem, so that's not an external facing interface. That's part of the internal service implementation. So, in effect, what you're doing is you're making that a black box to the consumers of the service.

Now, from an engineering point of view, if I were going to build this service, Dixie, I would completely agree with you. You can't consider and think through how that would work without going down those various roads and that actually, on the technical specification work, are things that we're looking for, but to the ultimate end consumer of the service that's black box.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Just to elaborate on Dixie's question and your answer was quite clear and thank you for that, but does the external facing interface also specify behaviors around conflict resolution or potential cross domain management and so forth or is it simply a query specification? In other words, if two individuals, if someone asserts control over a different domain is that reflected in the behavior descriptions or is that out of scope?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

I'm not certain I understand the question.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Well, let's say there are multiple instantiations and someone asserts the right to control their listing in a different domain than wherever they are right now and it's really maybe closer to John's question about security—

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Okay. I think I understand. The update portion, I don't believe—so this is the query side of the behavior that has been standardized. We have not, as part of the specification, created the behaviors around the update and management side of the directory.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Okay. That answers my question. Thank you.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

I have a quick question. You might have covered this in some of your remarks, but are there examples or test bits of this type of technology at this point?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

There is actually. The person who was the original champion behind this is a gentleman by the name of Max Walker, who works for Victoria Health, for the State of Victoria in Australia and they actually have a working services directory that's in use across the whole of the state, which allows citizens to go and discover service capabilities. One of the things that I neglected to mention: There are two or three other countries that are currently very keenly interested in and are working on this type of work and have expressed interest in collaboration around it. So I'm aware of at least three states in Australia that are either building one of these or are considering building one of these. I'm aware of one that's implemented and I'm happy to provide that as follow-up. I'll give you a link and you can actually interact with it. Then the national program in Australia and in New Zealand are both either actively participating in this or exploring the same sort of a directory.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

I thought Canada was also looking at it, but maybe they're not.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

At least for this particular spec, I don't know well enough to be able to make that assertion. They might well be looking at it and I know they have some of the same capabilities. Whether they are looking at our specific spec or not I can't speak to.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

I know you said that the OMG work is where the content will be addressed, but do you anticipate that that content will address both, enterprise level and individual level?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Well, actually, if I could correct that: The OMG is where the platform bindings are happening, not the content. The content work that I'm aware of is the activity that's happening in the HL-7 Patient Administration Workgroup and I believe that they are looking at both organizations and individuals, but I would defer to Galen on that.

Galen Mulrooney – U.S. Department of Veteran's Affairs

That's correct, Ken.

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

Are there pictures of this anywhere?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Yes. I'm happy to provide—and my apologies that I didn't get ... I'm currently chasing what IP I can freely distribute and not, but I'm happy to provide you with, for those that are HL-7 members, you know, certainly this work is part of the HL-7 normative edition, so you'll have access to that. The OMG RFP is publicly available and I'm happy to send out links to what assets are available to the committee.

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

So I would be particularly interested in the federation versus the centralized index and what the big picture view on that would look like, so if there's anything like that I'd love to get my hands on that.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

The short—I'm being very honest; you won't find that yet, because that would be a product of the submission that's happening against the OMG RFP. So the OMG has put forward those requirements and then it is up to the industry submitters to explain how they're addressing that set of requirements.

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

Okay. Well, then I guess I'd like to see what that language looks like in the RFP—

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

We could certainly do that and we have several. This isn't the first spec to have done this collaborative process. It's more like the fifth or sixth, so you know, we have precedence on how this has been done.

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

Great.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Another question if there's time: Directory service is not a new space for computing in general and even in healthcare. How much of sort of reinventing the wheel is going on here? In particular, how does this differ from the IHE HPD profile, the healthcare provider directory? How does it differ from behaviors that would describe something like LDAP?

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Let me talk to the LDAP side first and on the HPD. I'm not sure I can give—well, one step at a time.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Yes. I'm sorry—

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

No. That's fine. The short, we did look at LDAP and actually had to defend the OMG architecture board around issues, such as LDAP. I think some of the significant differences really stem from the use cases. LDAP is really around individuals and permissions and those types of things more. I mean it's a different type of directory trying to solve a different problem in my view. We started from use cases and did do a good canvassing of what was available at the time. HPD, I don't remember the exact sequencing of HPD availability and the healthcare and community services provider directory. This, in fact, had been going for a significant period of time. I'll defer. I know John is on the line; maybe he can jump in if I'm misstating anything.

Traditionally, most of the IHE work has not been specifically around the services in a service architecture. It's more around binding of existing messaging specifications, so I believe a lot of these can work in concert and I'd certainly be happy to and would encourage if there are parts of HPD that fit into the healthcare and community services directory, we would certainly be very, very open to that as part of the OMG side of things. I don't know that there—we've been solving slightly different problems in terms of how we come at this architecturally and that's been the distinction between the two communities.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Okay. Thank you very much, Ken. That was very useful to us and exactly the kind of information we were hoping to get from you.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

My pleasure. Thank you.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

And if you do have follow-on detail like that that was asked for, that Jeff asked for, either pictures or text descriptions, please send it to me or Walter.

Ken Rubin – HP – Chief Architect, Federal Healthcare Portfolio

Will do.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

And we will distribute it to the group. Okay. Moving on to Greg DeBor.

Greg DeBor – CSC Healthcare Group – Partner

Hello, Dixie. So, should we plan on spending about 20 minutes on this?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

That would be just fine. Yes.

Greg DeBor – CSC Healthcare Group – Partner

Hello, everybody. This is Greg DeBor. I'm a partner with CSC's healthcare division. CSC, as you probably know, is a big, global IT and professional services company with a big presence in healthcare. My role in the company is to manage our operations in healthcare in Massachusetts and out of that probably the biggest thing we do is we have created and ran the New England Healthcare Exchange Network, or NEHIN, since 1998. NEHIN is a network that is doing reimbursement related administrative type of processing, e-prescribing out to the Surescripts network, and clinical health information exchange, having acquired the assets of the former MA-SHARE RHIO up here, which merged into NEHIN. So NEHIN is across all of those service lines and the program management and technology support portion of it is contracted out to CSC.

On the line with me is Dan Kearney, who works as the Business Requirements Architect on the provider directory that we've developed. I've asked Dan to be on the call to answer questions about how we got to the standards that we are using and how this works across the enterprises and the individual domains.

So just a little bit of history of NEHIN that sets this up in the context of a provider directory to get started and then we'll get into the directory and the decisions we made around the standards. NEHIN started as a distributed network around administrative processing and then connecting payers and providers and then started on e-prescribing before we got into clinical health information exchange. In those two use cases where you're trying to process some sort of reimbursement related information or conduct a process between a provider organization and a payer health plan typically or move a prescription out to the Surescripts network or get very specific information related to filling a prescription like formulary data from one place to another, you can use very directed exchange, targeted exchange. You only need to know about the entity level addresses, because there aren't that many of them. Our network today has about 200 end points, which range from individual provider offices to major payers, government agencies and big provider organizations, like Partner's Healthcare up here, which might have now 10,000 users behind them. But all we were doing early on with the reimbursement related and e-prescribing work was getting the health information that we were exchanging to the mailbox, to a doorstep.

So when we set somebody new up on the network, we basically needed their URL address and who their administrator was and we could easily configure that in the software and then they could handle all of the connections behind that to their internal systems, which might mean directing something through the use of their LDAP directory to their individuals. But when we got to the clinical health information exchange and now you could be sending, routing data to very many places and need to get it critically into the hand of an individual provider, the problem expanded or the challenge associated with maintaining identities and authorities and the routing information expanded exponentially.

So we started this work in, I'm thinking about the 2007 time frame—does that sound right, Dan?

Dan Kearney – CSC – Architect

Yes, that sounds right, Greg.

Greg DeBor – CSC Healthcare Group – Partner

Yes. And we looked around for what standards were available to do that kind of now individual related routing and we worked with our participating organizations to understand what level of routing they wanted. Two major requirements kind of guided us or two major factors guided us.

One was that there was not consistency among our participants on whether they wanted individual or entity level, enterprise level routing. Some places were maintaining a provider directory at the corporate level, were maintaining an LDAP directory and just wanted us, even on the clinical exchange where it was critical to direct it to a given doctor, to get it to their doorstep and they would take over from there.

Other people, however, had no notion of how to manage their provider data or the routing associated with it and wanted us to not only manage that, but also wanted us to be able to manage the preferences of their providers for receiving data, which could be through e-mail. It could be through a Web service that delivered a SOAP package in a RESTful way to a URL, which then they could use for machine-to-machine communication. We even supported fax server communication. So we wanted to track all of those and so some organizations wanted us to track all of those preferences and make sure that the documents that we were exchanging made it into the hands of either the designated provider, the provider designated by a patient or by another provider in a referring relationship, a consultation relationship. Or to some proxy that they designated to receive that information, whether that was an office manager or a nurse or whoever it might be. So we had some variation across our members in terms of the requirements. That was one big factor.

The second big factor was we started looking into standards and couldn't find something that adequately supported our use cases. We looked at LDAP and decided that would be very difficult to implement, manage and maintain cross enterprise. And we looked at the IHE, HTP, HPD specs or basically the HITSP implementation specifications related to that and found that that was not widely accepted. It might be overly complex and although it could develop into something, it was not widely adopted.

So we made the decision to come up with our own standard for this within the community. The community spans Massachusetts and Rhode Island for this, but is very aware, I would say, of everything that's been happening at the federal and even the global level around HL-7, because again, Dan and I are in CSC and related to initiatives all over the country and the world around this stuff. Of course, as you probably know, John Halamka is the Chairman of NEHIN and so he keeps us connected to the most recent developments in the standards world and the policy world around HIE.

So we decided to basically create our own standards that would support both entity or enterprise level, cross enterprise level communications, but also support individual level routing, individual provider level routing for those users, who wanted to implement it that way. We developed a schema based on, I would say, HL-7 granular data elements, so it's very much following the data specifications that you would find in HL-7, but it's our own implementation of what we call a participant directory. And participant because it covers not only providers, but also the health plan participants—government agencies, individuals within government agencies, to whom we expect to route this data also.

So the functions that we've developed, first of all, are a Web-based user interface and Web services for maintaining, for registering and maintaining locations, for registering and maintaining providers. For doing the same for delegates, proxies that people might want to delegate routing to and then a way to register and maintain the associations between providers and locations and the providers and their delegates. So we will still configure a machine with a URL to be an end point on our network and the organization that's contracting with us and setting up trust agreements with the other participants in NEHIN will designate an administrator for that. The administrator will then use these Web interfaces to configure whatever they want to do on their end, either it's that they just want to receive the information at the entity level and take over from there or they want to actually enter all of their locations, providers, delegates and the associations between them into our community level directory.

We also set up the facility to maintain this directory at the local level and to either just leave it there or to upload it to the community or to use a community level directory around this. So it's a fairly federated model. You can search in this directory on NPI, on last name, first name, clinical affiliation, city, state, zip to find the provider who you are, who you want to route to, or the participant, rather, who you want to route to. Then we consult with the end organizations, but don't dictate to them how they should incorporate this into their workflow. So what I mean by that is we would encourage them to set up a process, say in a hospital admitting operation, to ask the patient or to find out from the referring physician where data should be routed and set up all of those connections in the directory beforehand. Then when the discharge summary comes out, the information just gets routed according to what's been set up in the directory.

That's a quick overview kind of of the history of it and how we got to the standards we chose and, hopefully, some of the use cases. Dan, is there anything you'd like to add that would maybe further help the group understand how this is used here?

Dan Kearney – CSC – Architect

I think you did a pretty good job, Greg. You covered pretty much everything. Like, Greg, for the main pieces of our directory, our registries, organizations can be registered in the directory and you can set up locations and assign providers to those locations. We also support setting up delegates and maintaining the association between the providers and the delegates. So it's basically two types. You can register just the organization if you're a payer organization or if you're a provider organization, of course, you'd register your organization and the provider. So it's pretty flexible.

Greg DeBor – CSC Healthcare Group – Partner

One thing I left out, Dan, which we should probably explain, is I might have over emphasized the user interface, because we also developed a Web service for organizations to be able to upload in bulk or incremental changes from their corporate provider directories, right?

Dan Kearney – CSC – Architect

Yes. What we found in working with our participants, some organizations were pretty sophisticated. You know, they had a large IT department and they wanted to automate the registration process, like connect using the Web service, upload all of their providers to our directory directly from their internal directories, so if there was a new provider added to the hospital then it would be automatically updated. But we also found that some organizations didn't have the ability to, either didn't have the technical ability or they were smaller practices; they wanted a process or a service, a Web-based user interface where they could manually maintain that. So we sort of built the two capabilities.

Greg DeBor – CSC Healthcare Group – Partner

We believe that what we've developed would be extensible to other states and to a national effort. We've talked to other states, who are interested in this. We're not a standards development organization. We are certainly now interested in looking at what Ken described as kind of the more advanced balloting of a real standard around this. We made the decision based on the pragmatic requirements of people who were ready to do this in our network to roll our own, if you will, but we did it in a way, hopefully, that was aligned enough with industry developments that we could always align with and comply with any kind of industry standard as it developed. So we'll certainly be monitoring with that and Ken's discussion was great. The information that Ken provided was very interesting. We'll look into that.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

It sounds to me a little bit like you've merged the concerns of directory services with the concerns of workflow. I'm unclear whether the workflow information that you've captured is just information necessary for some other workflow system to use to route things or is it, in fact, part of a workflow system. Where is the boundary between those two worlds?

Greg DeBor – CSC Healthcare Group – Partner

Yes. I would say—and, Dan, you can pipe in on this—that we have developed a rudimentary workflow system within the network to handle this. It's not designed to tie into another workflow system, but it's designed based on the requirements we heard from our participants and the use cases that they wanted to support to a managed workflow sufficiently to get the data to the right place in the right manner. I know that sounds a little vague, but there was a lot of variation in what people wanted to implement and so the right place could be just get it to our organization. We'll take it over from there, because we have our own internal enterprise workflow or support within your network, the ability to route this according to the workflow rules that we give you, including a straight, RESTful SOAP, machine-to-machine implementation, an e-mail, secure e-mail implementation, a fax implementation and also including delivering that to the specified provider or to somebody that the provider has delegated this to.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

So your system actually implements some of that workflow for those people who want to use it?

Greg DeBor – CSC Healthcare Group – Partner

Yes.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

The reason I'm asking it is, obviously, back when you did this there was no alternative, such as Direct, available, Direct Connect. I'm wondering today if you were doing it again, would it be possible to separate the directory lookup aspects of just finding out what someone's address is from the actual workflow part, assuming that something like Direct was used to actually deliver the messages?

Greg DeBor – CSC Healthcare Group – Partner

Yes. I think it could be separated. I would question how well developed Direct is in terms of implementing a workflow of its own, but we intend to incorporate a Direct pilot into this pretty soon.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Yes. I think Direct would say they don't do workflow at all. The end point that picks up the Direct message could implement workflow but that would be somebody else's responsibility other than the simple forwarding capability—

Greg DeBor – CSC Healthcare Group – Partner

Yes. So I think Direct in many—well, yes, I guess Direct might be in many ways just kind of a simplified way to do either what we would call the entity-to-entity communication, understanding that it could be entity to individual provider in the Direct world. This is roughly equivalent to what we do when we go entity-to-entity but recognizing that in Direct the receiver can be at the individual level.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Yes. It could be individual or group or entity or whatever.

Greg DeBor – CSC Healthcare Group – Partner

Right.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Then one last question: What's the status of the source code itself in terms of if someone did want to leverage your work? Is it available as a reference implementation in some way or is it considered proprietary?

Greg DeBor – CSC Healthcare Group – Partner

Yes, I guess it's considered proprietary, but NEHIN has always been, as a non-profit, open to sharing it with people in the right manner, I guess is probably the best way to say that. NEHIN isn't funded to support kind of the packaging in support of other groups and understanding the code and specifications and they don't want to see the efforts of the CSC support team diluted in supporting other implementations. But it's worth a discussion if it can be worked out and NEHIN feels like it's made whole in terms of the support that it's getting and not distracting the support team then it's open to that.

(Overlapping voices)

Greg DeBor – CSC Healthcare Group – Partner

Run it past the governing board.

John Moehrke – Interoperability & Security, GE – Principal Engineer

Greg, I very much appreciate your bringing some real use cases, which I really think is great. I know I think being able to understand how the directory is to be used, what's truly needed from it versus what we could imagine is needed I think is really great. Are you going to get into what you did use to implement this? It sounds like it's more of a we'll distribute some software to you or through a Web interface or what have you to make it happen as opposed to the selected standards or published interface standards.

Greg DeBor – CSC Healthcare Group – Partner

Yes, it's closer to that, John, but I mean there are published interface standards that we created. They're proprietary to NEHIN, but as I said, they're based on HL-7 work and consistent with, you know, what we saw from other places. So we could share implementation specifications. Again, we would run that past the governing board to make sure that there are no issues with that. Then, yes, what we do is, what CSC does, as the technical partner on this, is then take those requirements and specifications, develop them into software, which in our world, is all, at this point, Microsoft based, .NET based and we distribute that to the members. Now, we distribute to them the specification and the software and the use of the software is optional on their part. They can just take the specification and develop it into something that they have on their end, but at this point, most all of the participants, I guess, with the exception maybe of the state agencies, have decided we'll just take your software because that's the easiest way to do it.

John Moehrke – Interoperability & Security, GE – Principal Engineer

Yes. Okay. That was getting to my next question. So it sounds like you think you've enabled a heterogeneous environment, but it just happens to turn out they're all using the same stuff.

Greg DeBor – CSC Healthcare Group – Partner

Yes.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

I have a question. Several weeks ago or at our last meeting we had X12 people testify and they talked about the need for directories to include associations between providers and the health plans whose networks they were in. I just wonder whether your schema includes those kinds of associations.

Greg DeBor – CSC Healthcare Group – Partner

No. It doesn't, right, Dan?

Dan Kearney – CSC - Architect

No. Correct.

Greg DeBor – CSC Healthcare Group – Partner

Yes. That got into, Dixie, a few months ago a discussion about white page, yellow page and that felt more like a yellow page kind of requirement that may be required down the road. Frankly, as we get more health plans involved in clinical exchange that may become a stronger requirement, but right now it isn't.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Well, I think that actually it was needed – they presented a pretty compelling argument, both for the need for clinical purposes, but also when consumers use the directories as well, so –

Greg DeBor – CSC Healthcare Group – Partner

I mean this is the white page/yellow page problem. Do you need to know what network a physician is in to be able to find out if your physician can provide service under your insurance and that kind of thing—that's what you're getting at?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Yes, but I don't consider it a white page/yellow page thing, but it's more of the types of information that are needed in these provider directories—

Greg DeBor – CSC Healthcare Group – Partner

Yes and the reason I—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

To be able to support both, administrative—well, not both—administrative transactions, clinical transactions and consumer needs.

Greg DeBor – CSC Healthcare Group – Partner

Yes.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Are there other questions?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes. I have a couple of questions. First of all, yes, thank you very much for this presentation. This was an excellent example of how things work in real life. My understanding though was that you had sort of a dual approach. For entity level you had more of a centralized approach where you handle and manage a central directory of entities and then for individual level you actually had a more distributed kind of approach where entities will handle their individual—well, their individual providers separately and then interface through this kind of a facilitated routing mechanism. Is that how you handle it?

Greg DeBor – CSC Healthcare Group – Partner

Well, so entities can choose whether they want it to be done at the centralized, community level or whether they want to maintain it themselves.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Then the other question is really the interaction between the EHR and the directory itself, so okay, I'm a provider that's looking for another provider to send a message. Does the EHR interact electronically, directly with the provider directory to find the provider and then route the information?

Greg DeBor – CSC Healthcare Group – Partner

No. We provide an interface spec and a gateway point for the EHR to interact with. We do not get into the EHR integration—but I mean with our software. We do get into working with the users to figure out how to do that. Is there anything you want to comment there, Dan?

Dan Kearney – CSC – Architect

Yes. We provide, like Greg said, there would be a gateway at the local site and through that gateway you could look up the community registry and in the community is where, of course, all of the providers would be located, so they would connect through our Web services to that community.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Okay. So each entity has a local—and each site basically has kind of a server that has that functionality, that—

Dan Kearney – CSC – Architect

Correct. Yes. That's the general setup.

Greg DeBor – CSC Healthcare Group – Partner

And so then we've given them a Web services interface where the EHR vendor or the site can develop the integration to the level that they want to with the EHR.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Okay. Then the last question I have—well, two more just quick ones. You said that some large entities that have their own provider directories, they wanted to be able to upload the data, if you will, to kind of provide you with that information not in a—through a Web based, manual entry kind of system, but more through, perhaps “a batch file” that has all of the providers. Is that how some of them do it, like large systems in Massachusetts that—?

Greg DeBor – CSC Healthcare Group – Partner

Yes. What we found were the larger organizations, they wanted to take advantage of the Web services so they wouldn't have to maintain it—assign an admin person manually to maintain this. But some kind of triggering points that would trigger a new provider to be added or if the provider changed his address then that would be another trigger that would send data from the organization to our directory. So if they had

the technical capabilities to do that, many of the organizations implemented that method. But like I said, we also have this Web-based user interface that you can use and we found so far more of the smaller sites are taking advantage of that. Some are in the middle of implementation now and some are even thinking of using a hybrid model where they do their initial upload using the Web services and since their address, the provider addresses do not change much they're going to maintain them using the Web-based. So it's up to the participant to select what method they want to use to maintain the directory.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

My last question is about access to the service: So is there a restricted access? I mean is there some way to control and to monitor who accesses the directory services?

Greg DeBor – CSC Healthcare Group – Partner

Yes. Well, we maintain auto logs of who accesses. Our providers are registered. We maintain strict auditing control on that and—

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

But you don't use like a username/password or some sort of a secure—?

Greg DeBor – CSC Healthcare Group – Partner

For the Web based, yes. It's all username and password based. It would be set up within the system. Of course, with the Web-based interface it's a SOAP call and it's with the gateway is installed in the local site behind their firewall, so it's secured that way.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Greg, is it exposed to consumers in any way? Can consumers use it to look up providers?

Greg DeBor – CSC Healthcare Group – Partner

No.

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

I'm one of the committee members. On the Fair Credit Reporting Act, which is one of the better privacy laws, when you pull up your credit report at the bottom of the credit reports are the inquiry lines, which show you everybody that's actually looked at your report. I'm curious if that's built into your model at all that as people use the directory service and look things up does it leave their fingerprints or footprints on it so later somebody could look at the record and see who has accessed that record.

Greg DeBor – CSC Healthcare Group – Partner

I would say that's more of a general question about our application than about this directory in general. So we do support that for the use of health information exchange, including lookups that happen through our user interface that we've built for looking at clinical data. I'm not sure if we keep a log of all machine lookups that come—if somebody looked it up within, say, a native EHR would we have a logging record of that?

Dan Kearney – CSC – Architect

No. You're correct. It's within the Web-based, but within the Web services access, no. We didn't log it there.

Greg DeBor – CSC Healthcare Group – Partner

So this not only for provider directory, but any, any data that flows through the system we're logging who sent it where and then if they're using our Web-based user interface, whether—who viewed it and we have that—

Jeff Jonas – IBM – Distinguished Engineer and Chief Scientist

Right.

Greg DeBor – CSC Healthcare Group – Partner

Some of our members are looking at that as their disclosure logging and reporting capability in the organization.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Just one last question from my part: So if you were to scale this app to other states or, say, Vermont or New Hampshire, around Massachusetts, how do you see it being cross state, able to interact across the states? Do you—?

Greg DeBor – CSC Healthcare Group – Partner

Well, so the primary key to the whole system is the NPI and we have this uploaded with data from the NPI as a starting point, which then, you know, needs to be kind of augmented with all of that routing and delegation and location information. So I'd say it's wholly compatible with an NPI based approach or a national approach. The question is who is going to administer the data, working out with participants whether they want to upload data using a Web service, whether they want to maintain it using a user interface and then how distributed that maintenance is. Does that maintenance happen at the end, participating points the way it does today? And can that be implemented, supported and trusted or would, say, a state HIE organization want to take on some of that?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

But you didn't really talk about an NPI role. Where does that come into play?

Greg DeBor – CSC Healthcare Group – Partner

Well, it's just that NPI is part of the schema and I'd say the primary key to all of the data and we download the NPI data – I'm not remembering the right term for that or the system that it comes from, if that's NPPEs—

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

NPPEs data. Yes.

Greg DeBor – CSC Healthcare Group – Partner

To set up a base level so that when somebody first goes in to configure their providers or configure a new provider they can say, "Okay. I'm in there as this. That's my starting point and my other providers are in there. I can look them up and grab them and start with some base data to build my directory," especially if they are building it using the user interface. They're not maintaining their own provider directory. If they're maintaining their own provider directory NPI becomes a crosswalk, kind of foreign key between the two systems.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Now, you're talking about a—so this isn't like a master patient index; this is a master person index?

(Overlapping voices)

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

This is a national provider identifier.

Greg DeBor – CSC Healthcare Group – Partner

National provider identifier.

Dan Kearney – CSC – Architect

A master provider index.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

MPI?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

The National Provider Identifier, the NPI.

Greg DeBor – CSC Healthcare Group – Partner

The National Provider Identifier.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

I see. NPI. I get it.

Greg DeBor – CSC Healthcare Group – Partner

Yes. I'm sorry.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

I had a phone problem there.

Greg DeBor – CSC Healthcare Group – Partner

Yes. I'm sorry.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Okay. All right. Thank you. Thank you, both, very much. This was very, very useful. We really appreciate you ... —

Greg DeBor – CSC Healthcare Group – Partner

I'm glad to help.

Dan Kearney – CSC - Architect

Should we stay on the call or—?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Yes. I was just going to say our presenters are free to either, by your choosing, stay on the call—Walter is going to give us a run-down of the current state of the work within the Policy Committee Workgroup and you're free to stay on the line or drop off, whichever you need to do. Walter?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes. Thank you. So we can upload the slide presentation on the Web. So, just to bring up again, the work of the Policy Committee's Information Exchange Workgroup has been divided into two parts. As you'll recall, the first part was recommendations on an entity-level provider directory and then the second part is the individual-level provider directory recommendations.

Just skipping some of the first set of slides to slide number four, basically it highlights some of the ELPDs. I'm not going to touch on those just in the interest of time here, but you know, this is sort of the summary slide of the general recommendations on ELPDs, which is the first set that we started to work on from the standards side.

The next slide, number five, is where we start talking about the individual-level provider directories. So the Policy Committee Information Exchange Workgroup really looked at the individual-level provider directory sort of a little bit different. It was interesting that it followed somewhat the same approach that Massachusetts did in the sense that for the most part individual provider directories are really maintained and sort of kept up to speed, kept up to date by entities themselves and to try to centralize some of that would be very complex and difficult. So the recommendations from the Information Exchange Workgroup go around that line of saying, "Well, in the ILPD we're going to try to push things down to their organizations," and expect that through the standards and through some facilitated communication exchanges the entities that maintain those ILPDs and operate those ILPDs will be able to share that information and exchange it basically.

So this slide just basically highlights some of those concepts. Still, the main purpose is to facilitate the basic health exchange functions by enabling basically the discovery of some specific characteristics about individuals and mapping the individuals to entity addresses. So there is a clear need to link the ILPD with the ELPD from an interaction perspective.

So the next slide just gets into some of the scenarios that the workgroup looked at. There is a detailed description of each of these scenarios, but this slide just summarizes basically the four—actually, nine scenarios really. Because we look at clinic-to-clinic exchanges in a push and a pull mode; a hospital-to-clinic exchange in a push and a pull mode; you can see here, public health and investigation in a push and a pull mode; and lab-to-clinic in a push mode. Those were sort of the scenarios we looked at.

The common threads across all of the scenarios were basically the following: The submitter needs to send a message to an individual provider. The submitter has some information on the individual, but does not have the individual's location. The ILPD is used to identify all of the possible locations where this individual works and with some additional information then the submitter is able to identify and select the appropriate location. Through the link between the ILPD and the ELPD the entity will be able to obtain the security credentials and digital certificate information to submit the message and then they submit the sender data. So that's kind of the common thread across all of these scenarios, whether it's a clinic-to-clinic or hospital-to-clinic.

Now, where it says here clinic-to-clinic it gives the impression that it's still entity-to-entity, but in this case what we're talking about is a provider that works in a clinic trying to find a provider that works in another clinic. I'm trying to find the right location from that other, second provider because that second provider might work in four or five different clinics.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Just a question: When you described, you just walked through the push scenarios. What did you mean by pull?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes. The pull scenario is where we're looking at situations where, for example, a patient shows up at a hospital emergency room and the hospital needs to retrieve the data about that patient from a clinic or provider. The hospital only knows the clinic or the clinician's name, the individual provider's name, but now needs to find the location of that provider, where that provider has seen the patient and then be able to pull the data or request or query or submit a query to that clinic. So the hospital uses the ILPD to identify the location of the provider and the ILPD provides the list of the various locations. Then the hospital is able to identify the appropriate location and submit a query and if it doesn't have all of—let's say there are five different locations; the hospital can send a query to all five of the locations that are listed in the ILPD as locations for that individual provider. Then the clinics receiving or those locations receiving that query can respond to the hospital and submit the data back to the hospital. So that was sort of the pull. There was a query to request data rather than a push, than sending data.

John Blair – Tacanip IPA – President & CEO

So it's querying another provider's system?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes, it's querying another—well, it's looking in the ILPD, the various locations of where a provider, individual provider practices and then querying all of those locations.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

But that doesn't have anything to do with the ILPD itself. The ILPD is just supplying information about a service. It could be a service into which you push or it could be a service from which you pull.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes. This is just describing one of the functional capabilities of the directory; that it will allow the identification of locations to query. It's not used to do the querying itself.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Right. And it doesn't assume that that's necessarily even present, but if it were present you could find it if it was listed in the ILPD.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

That makes sense. I just think we need to be clear, keep clear the distinction between the directory service and any associated information exchange and/or workflow, which are really different, albeit, obviously, tightly coupled in the interdependencies.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes. Absolutely. I think that. I think that was the point that was made earlier too, to separate the two.

So, let me go to the next slide, slide 13, and get into some of the recommendations. We divided the recommendations into two categories basically of recommendations. One is recommendations that provide ONC with some policy directions of where we should go, areas that require to enable the creation of certain elements of the system, like a national directory system or minimal levels of standardization that is going to be needed in implementing this. So those are some policy directive types of recommendations. Then the other set of recommendations are more best practice recommendations or recommendations for entities that operate ILPDs, that would operate ILPDs to implement and to use, but they're not sort of requirements in terms of standard requirements or kind of must do kinds of requirements. These are best practices and we make distinctions along the way when we talk about those recommendations in the next few slides.

The next slide highlights basically the four areas in which we are making recommendations. The first one is the content and these are similar to the areas we made recommendations for the entity-level provider directory, so content. What's the minimal data that should be included in an ILPD? Functionality; what's the core function that should be supported by all ILPDs? Security, access and audit; so what are some of the requirements to protect the data and protect access to that data? Then some policy levers recommendations or what kind of policy levers can be used to facilitate the adoption and use and sustainability of these ILPDs?

We divided basically the recommendations into four types, four specific recommendations, as I mentioned. So this is the first one, the ILPD content. With respect to policy directions we made a recommendation that who should be listed and what should be listed in the ILPDs should be individuals. Only individual healthcare providers, who are licensed or otherwise authorized to provide healthcare services or support the health of a population, so this is sort of a general statement about any individual healthcare provider should be listed in this individual-level provider directory.

The type of information about them are grouped into these four or three areas; demographics, sort of the basic demographics about the individual; identifiers, such as the NPI, the DEA, the state license and other numbers; and then the entity affiliations so that it can be mapped into the ELPD entry for each of those entities. There are a few best practices that are recommended as well. I'm not going to get into those just in the interest of time again, but those are, again, some recommended practices around this ILPD content.

The next slide is the ILPD functionality. So we make two policy directives recommendations. The first one is in order to support directed exchange and query retrieve functionality the ILPD will need to provide basic discoverability of an individual provider and their practice location with a tight mapping between the individual's ILPD listing with the individual's ELPD connection basically. Then the second policy directive is develop procedures and a set of policies to establish appropriate linkages between the ILPD and ELPD to ensure that connection happens and is able to be used in the querying of the ILPD and through the

ILPD the querying of the ELPD. Those were two aspects about the functionality of the ILPDs. Very generic.

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Was the Policy Committee's view that there should be maintained a distinction between ILPD and ELPD or are they merely using those terms to describe functional subsets, which might actually be combined into a single thing?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

I think realistically it's the latter. It's we're seeing it more as functional separation, but not physical or technical separations. That has been sort of validated through the discussions of the Standards Committee where in reality, in most of the cases the concept is that the two live together really, so—

David McCallie – Cerner Corporation – Vice President of Medical Informatics

Yes. I think it would be hard to tease them apart.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Yes. So yes, when the Policy Committee made this recommendation they were pointing to some directions and expectations that like the entity-level provider directory would have much more of a centralized, national structure and then the individual-level provider directory would have much more of a decentralized, federated, pushed out kind of a structure. I think the idea is that clearly the two need to live together and operate together and however the architectural approach, if you will, works out it will be fine. I don't think there is any specific expectation from the policy side about a particular architectural model.

So the third set of recommendations is about security, access and audit. So we had four policy directive recommendations and they relate to establishing policies and procedures that define who can access and use the ILPD and what the appropriate mechanisms to allow for that access and what kind of data can be accessed, all of those aspects about access. The expectation is that there's some sensitive content in the directories that need to be appropriately handled. The concept that implementing a security policy and procedure is going to be necessary; that ensures basically that the data contained in the ILPD is appropriately protected from unauthorized changes and only authorized individuals have access to the data maintenance.

Then an audit trail capability basically; that the system should have the ability to maintain audit trails and ensure there is an appropriate way to monitor access and use of the data and investigating the inappropriate uses and breaches. So those were the policy directives; again, there are some best practices along the way as well.

Then the next slide—and I apologize for rushing these through—I just wanted to bring you a very high-level review of them. Again, this will be expected to be presented to the Policy Committee on May 11th and then after that, assuming that it will be approved by the Policy Committee, we will have a chance to again reconfirm them here with the Standards Committee. So the last set of recommendations relate to the policy levers and these were a set of recommended policy directives that include things like the health IT Standards Committee should be directed to identify and recommend to ONC technical, interoperable standards for ILPDs consistent with these policy recommendations.

The federal EHR certification standards should also include standards for ELPD and ILPD ability to interoperate basically, so EHRs should be expected to have some standard functionality to interoperate with provider directories. CMS should make systems like NLR or the PECOS system their provider enrollment system. And the NPI, where the NPI is available already, but to ILPD services that are funded through the state HIE and this will allow for the rapid on-boarding, if you will, or uploading of the data to create those directories. We're also recommending the state using HIE Cooperative Agreement funds to establish state-level ILPDs should be directed to adhere to the standards that are being adopted through the recommendation from what would be the Policy Committee and the Standards Committee. Then lastly, CMS should consider how they could require state Medicaid agencies to incorporate ILPD use as

they approve Medicaid Health IT plans and fund state EHR incentive programs. So those were some of the policy directives that were included in the recommendations.

The rest of the document includes basically two appendices. The first one is the terminology appendix, which again, this is an appendix similar, basically the same appendix as the one that we provided on the ELPD recommendations. Then the second appendix is a set of use cases, a detailed description of the use cases, which, certainly, we won't have time to meet to get into here, but—so again, those were the overall set of recommendations. We will be finalizing and discussing them again at the Policy Committee meeting next May 11th. Then from there it will be delivered to ONC and then be brought to the Standards Committee, but I think, generally speaking, we expect that this will be the set that will be considered and hopefully approved by the committee. So we wanted to bring those up here to begin to look at those and begin to consider them as we discuss the recommendations on the standard side.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Well, thank you very much, Walter. I would encourage all of our workgroup to take some time to review these slides as well as the appendices. We do need to close this meeting. There is somebody else moving in in five minutes and we need to allow time for public comment as well. So with that, Judy, why don't we just go ahead and open the lines for public comment so that we can get out in time for the next meeting?

Judy Sparrow – Office of the National Coordinator – Executive Director

Yes. Thank you very much, Dixie. Operator, can you see if we do have anybody who wishes to make a comment, please?

Operator

We do not have any comments at this time.

Judy Sparrow – Office of the National Coordinator – Executive Director

Thank you, Dixie and everybody. That was very informative.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Yes and thank you, again, to our speakers and I hope everyone has a good weekend. Thank you very much.

Judy Sparrow – Office of the National Coordinator – Executive Director

Thank you. Good-bye.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO

Good-bye.